

**COURSE APPROVAL DOCUMENT**  
Southeast Missouri State University

Department: Engineering & Technology

Course No. EG410

Title of Course: Lean Supply Chain

Date: Spring 2018

Please check:  New  
 Revision


- I. Catalog Description (Credit Hours of Course):  
Introduce the principles and practices of the supply chain management and lean operations, and the integration of the two concepts. (3)
- II. Prerequisite(s): EG201
- III. Purposes or Objectives of the Course (optional):
- A. Identify the major drivers of the supply chain
  - B. Utilize effective inventory management policies, demand variability, and forecasting methods on inventory level and cost to manage a supply chain
  - C. Identify six attributes of a lean organization
  - D. Apply lean tools to reduce work in process and lead time in a manufacturing system
  - E. Apply lean principles to the supply chain management
- IV. Course Learning Outcomes (Minimum of 3):
- A. Students will be able to demonstrate creativity and critical thinking in the design of supply chain networks to meet desired technical and management criteria.
  - B. Students will be able to identify the opportunities and then apply principles of lean operations to systematically improve a supply chain.
  - C. Students will be able to utilize computer software to plan and manage the activities involved in a supply chain.
- V. Names of Faculty Qualified to Teach the Proposed Course:
- A. Jingjing Tong, Ph.D.
  - B. Khaled Bawaneh, Ph.D.
  - C. Shaojun Wang, Ph.D.
  - D. Serkan Varol, Ph.D.
- VI. Course Content or Outline (Indicate number of class hours per unit or section):
- A. Understanding supply chain (3)
  - B. Supply chain performance (3)
  - C. Supply chain drivers (3)
  - D. Network design in supply chain (Assign Project) (6)
  - E. Designing global supply chain models (3)
  - F. Demand forecasting in a supply chain and Midterm Exam (3)
  - G. Aggregate planning in a supply chain (3)
  - H. Planning and managing inventories in a supply chain (3)
  - I. Introduction to lean system (3)
  - J. Introduction to Kanban (3)
  - K. Value stream mapping (3)
  - L. 5s and other lean tools (3)
  - M. Lean principles in supply chain (Project Due) (6)
  - N. Final Exam

**Attach the following:**

- copy of example class syllabus and course schedule.
- memo from Library Dean assessing available and needed library holdings and resources.
- memo(s) from Department Chairs in affected departments stating possible issues and/or conflicts are resolved.

Signature:   
Chair

Date: 10/10/18

Signature:   
Dean

Date: 10/10/18

**COURSE SYLLABUS**  
**SOUTHEAST MISSOURI STATE UNIVERSITY**

**Department:** Engineering & Technology  
**Title of Course:** Lean Supply Chain  
**Instructor:** Jingjing Tong, Ph.D.  
**Schedule & Location:** TR 11:00 am-12:15 pm  
**Office Hours:** T 2:00-4:00 pm

**Course No.:** EG410  
**Revision:** New  
**E-mail:** jtong@semo.edu  
**Office:** PB213-G

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**I. Catalog Description and Credit Hours of Course:**

Introduce the principles and practices of the supply chain management and lean operations, and the integration of the two concepts. (3 credit hours)

**II. Prerequisites:** EG201

**III. Purposes of the Course:**

Upon completion of this course, the students should be able to:

- A. Identify the major drivers of the supply chain
- B. Utilize effective inventory management policies, demand variability, and forecasting methods on inventory level and cost to manage a supply chain
- C. Identify six attributes of a lean organization
- D. Apply lean tools to reduce work-in-process and lead time in a manufacturing system
- E. Apply lean principles to the supply chain management

**IV. Course Learning Outcomes:**

Upon completion of this course:

- A. Students will be able to demonstrate creativity and critical thinking in the design of supply chain networks to meet desired technical and management criteria.
- B. Students will be able to identify the opportunities and then apply principles of lean operations to systematically improve a supply chain.
- C. Students will be able to utilize computer software to plan and manage the activities involved in a supply chain.

**V. Expectations of Students:**

- A. Class attendance (on time) is strongly encouraged. Students are responsible for observing the class schedule if there is any change.
- B. Students are required to read the assigned materials.
- C. Students are required to research relevant topics and compose well-documented technical documents.

- D. Late assignments will not be accepted without prior approval from the instructor. Approval is generally granted in cases of documented emergency or department sanctioned professional activities.
- E. Quizzes/Exams cannot be made up without prior approval from the instructor. Approval is generally granted in cases of documented emergency or department sanctioned professional activities.

**VI. Course Content or Outline:**

Topic	Hours
Understanding supply chain	3
Supply chain performance	3
Supply chain drivers	3
Network design in supply chain (Assign Project)	6
Designing global supply chain models	3
Demand forecasting in a supply chain & Midterm Exam	3
Aggregate planning in a supply chain	3
Planning and managing inventories in a supply chain	3
Introduction to lean system	3
Introduction to Kanban	3
Value stream mapping	3
5s and other lean tools	3
Lean principles in supply chain (Project Due)	6
<b>Final Exam</b>	
<b>Total</b>	<b>45</b>

**VII. Textbook(s) and/or Other Required Materials or Equipment**

Supply Chain Management: Strategy, Planning, and Operation (6th Edition) by Sunil Chopra & Peter Meindl. Prentice Hall. ISBN-13: 9780133800203  
ISBN-10: 0133800202.

**VIII. Basis for Student Evaluation:**

**Undergraduate Students**

Homework/Quizzes	20%
Project	25%
Mid-term exam	25%
Final exam (comprehensive)	30%
<b>Total</b>	<b>100%</b>

**Grading Scale:** 90% ≤ A ≤ 100%  
80% ≤ B < 90%  
70% ≤ C < 80%  
60% ≤ D < 70%  
F < 60%

## **IX. Academic Policy Statement:**

Academic honesty is one of the most important qualities influencing the character and vitality of Southeast Missouri State University. Academic misconduct or dishonesty is inconsistent with membership in an academic community and cannot be accepted. Violations of academic honesty represent a serious breach of discipline and may be considered grounds for disciplinary action, including dismissal from the University. Academic dishonesty is defined to include those acts which would deceive, cheat, or defraud so as to promote or enhance one's scholastic record. Knowingly or actively assisting any person in the commission of an above-mentioned act is also academic dishonesty. Students are responsible for upholding the principles of academic honesty in accordance with the "University Statement of Student Rights" found in the STUDENT HANDBOOK. The University requires that all assignments submitted to faculty members by students be the work of the individual student submitting the work. An exception would be group projects assigned by the instructor. In this situation, the work must be that of the group. Academic dishonesty includes: Plagiarism and Cheating.

**Plagiarism:** In speaking or writing, plagiarism is the act of passing someone else's work off as one's own. In addition, plagiarism is defined as using the essential style and manner of expression of a source as if it were one's own. If there is any doubt, the student should consult his/her instructor or any manual of term paper or report writing. Violations of academic honesty include:

- Presenting the exact words of a source without quotation marks;
- Using another student's computer source code or algorithm or copying a laboratory report; or
- Presenting information, judgments, ideas, or facts summarized from a source without giving credit.

**Cheating:** Cheating includes using or relying on the work of someone else in an inappropriate manner. It includes, but is not limited to, those activities where a student:

- Obtains or attempts to obtain unauthorized knowledge of an examination's contents prior to the time of that examination.
- Copies another student's work or intentionally allows others to copy assignments, examinations, source codes or designs;
- Works in a group when she/he has been told to work individually;
- Uses unauthorized reference material during an examination; or
- Have someone else take an examination or takes the examination for another.

## **X. Disabilities Statement:**

Southeast Missouri State University and Disability Services remain committed to making every possible educational accommodation for students with exceptionalities. Many services and accommodations which aid a student's educational experience are available

for students with various types of exceptionalities. It is the student's responsibility to contact Disability Services to become registered as a student with an exceptionality. Accommodations are implemented on a case by case basis. For more information visit the following site: <http://www.semo.edu/ds/>.

#### **XI. Civility and Harassment**

The University strives to offer learning experiences and opportunities designed to help students think effectively, develop the capacity to communicate, discriminate among values, and make relevant judgments. A major determinant of a successful educational experience is a shared sense of respect among and between the students and their instructor. Mutual respect for all as well as a no tolerance policy on harassment of any kind is expected. Every student at Southeast is obligated at all times to assume responsibility for his/her actions, to respect constituted authority, to be truthful, and to respect the rights of others, as well as to respect private and public property.

#### **XII. Other Information:**

Questions, comments or requests regarding this course or program should be taken to your instructor. Unanswered questions or unresolved issues involving this class may be taken to the department chair Dr. Sophia Scott (email: [sscott@semo.edu](mailto:sscott@semo.edu), 573-651-2104).

#### **XIII. Final Examination:**

*Time:* TBA

*Date:* TBA

*Location:* TBA

*NOTE: Instructor reserves the right to change the schedule/material as appropriate to course productivity.*